What is claimed is:

1. An electronic junction comprising:

a first conductive component, said first conductive component comprising:

a substrate having a contact surface; and

at least one layer of molecular units having first and second ends, wherein at least one layer of molecular units is attached through their first ends to said contact surface through a type of association selected from the group consisting of: covalent bonding and strong electronic coupling; and

a second conductive component in electrical contact with said second ends of at least one layer of molecular units, said second conductive component comprising at least one metal and at least one metal oxide, wherein at least one said conductive component in said electronic junction has an electrical property that changes in response to a stimulus.

2. The electronic junction according to claim 1 wherein at least one said layer of molecular units comprises a chemical structure capable of being changed from a relatively non-conductive state to a relatively conductive state by the application of a stimulus.

3. The electronic junction according to claim 1 wherein said second conductive component is capable of storing a charge.

4. The electronic junction according to claim 1 wherein said chemical structure comprises at least one aromatic group when in said relatively non-conductive state.

5. The electronic junction according to claim 4 wherein said chemical structure is selected from the group consisting of: substituted phenyl groups, unsubstituted phenyl groups, substituted benzyl groups, unsubstituted benzyl groups, substituted phenolic groups, unsubstituted phenolic groups. substituted metalloporphyrin rings, unsubstituted metalloporphyrin rings, substituted ferrocene groups and unsubstituted ferrocene groups.

6. The electronic junction according to claim 4 wherein said chemical structure is selected from the group consisting of: biphenyl groups, fluorene groups, anthracene groups, phenanthrene groups, polyphenylene groups, polynuclear aromatic hydrocarbon groups, nitrated biphenyl groups, azobenzyl groups, and nitroazobenzyl groups.

7. The electronic junction according to claim 4 wherein said molecular units are chemically bonded to said contact surface of said substrate by a chemical bond having the formula:

R ---- X

wherein R is a metal, silicon or carbon atom of said substrate and X is an oxygen or carbon atom of said molecular unit.

8. The electronic junction according to claim 1 wherein said first conductive component comprises electrically conductive carbon.

9. The electronic junction according to claim 1 wherein said molecular units of a given layer are substantially the same length.

10. The electronic junction according to claim 1 wherein said second conductive component is chemically bound to said second ends of at least one layer of molecular units.

11. The electronic junction according to claim 1 wherein said molecular units in at least one layer are substantially parallel to one another.

12. The electronic junction according to claim 1 wherein at least some of said molecular units form an arrangement of molecular orbitals such that said electronic junction is capable of functioning as a semiconductor.

13. The electronic junction according to claim 1 wherein said metal is selected from the group consisting of: titanium, silver, gold, tungsten, and copper.

14. The electronic junction according to claim 1 wherein said metal oxide is selected from the group consisting of: titanium oxide, silver oxide, gold oxide, tungsten oxide, and copper oxide.

15. The electronic junction according to claim 1 wherein said electronic junction is devoid of electrolytic solution.

16. The electronic junction according to claim 1 wherein said electronic junction is devoid of liquid.

17. The electronic junction according to claim 1 wherein said second conductive component additionally comprises at least one ion.

18. An electronic junction comprising:

a first conductive component, said first conductive component comprising:

a substrate having a contact surface; and

at least one layer of molecular units having first and second ends, wherein at least one said layer of molecular units are attached by their first ends to said contact surface through a type of association selected from the group consisting of: covalent bonding and strong electronic coupling; and

a second conductive component, said second conductive component comprising:

a substrate having a contact surface; and

at least one layer of molecular units having first and second ends, wherein at least one said layer of molecular units are attached by their first ends to said contact surface through a type of association selected from the group consisting of: covalent bonding and strong electronic coupling, wherein at least one said layer of molecular units of said electronic junction has an electrical property that changes in response to a stimulus, and wherein said first conductive component and said second conductive component are in sufficient proximity to one another

that said first conductive component and said second conductive component are in electrical communication.

19. The electronic junction according to claim 18 wherein said chemical structure of said layer of said first conductive component comprises at least one aromatic group when in said relatively non-conductive state.

20. The electronic junction according to claim 18 wherein said layer of said second conductive component comprises at least one aromatic group when in said relatively non-conductive state.

21. The electronic junction according to claim 19 wherein said chemical structure is selected from the group consisting of: substituted phenyl groups, unsubstituted phenyl groups, substituted benzyl groups, unsubstituted benzyl groups, substituted phenolic groups, unsubstituted phenolic groups, substituted metalloporphyrin rings, unsubstituted metalloporphyrin rings, substituted ferrocene groups and unsubstituted ferrocene groups..

22. The electronic junction according to claim 20 wherein said chemical structure is selected from the group consisting of: substituted phenyl groups, unsubstituted phenyl groups, substituted benzyl groups, unsubstituted benzyl groups, substituted phenolic groups and unsubstituted phenolic groups.

23. The electronic junction according to claim 19 wherein said chemical structure is selected from the group consisting of: biphenyl groups, fluorene groups, anthracene

groups, phenanthrene groups, polyphenylene groups, polynuclear aromatic hydrocarbon groups, nitrated biphenyl groups nitroazobenzyl groups, and azobenzyl groups.

24. The electronic junction according to claim 20 wherein said chemical structure is selected from the group consisting of: biphenyl groups, nitrated biphenyl groups, and azobenzyl groups.

25. The electronic junction according to claim 18 wherein said molecular units are chemically bonded to said contact surface of said substrate of said first conductive component by a chemical bond having the formula:

R ---- X

wherein R is a metal, silicon or carbon atom of said substrate and X is an oxygen or carbon atom of said molecular unit.

26. The electronic junction according to claim 18 wherein said molecular units are chemically bonded to said contact surface of said substrate of said second conductive component by a chemical bond having the formula:

R ---- X

wherein R is a metal, silicon or carbon atom of said substrate and X is an oxygen or carbon atom of said molecular unit.

27. The electronic junction according to claim 18 wherein said substrate of said first conductive component comprises electrically conductive carbon.

28. The electronic junction according to claim 18 wherein said substrate of said second conductive component comprises electrically conductive carbon.

29. The electronic junction according to claim 18 wherein at least one layer of molecular units comprises molecular units that are substantially parallel to one another.

30. The electronic junction according to claim 18 wherein at least some of said molecular units form an arrangement of molecular orbitals such that said electronic junction is capable of functioning as a semiconductor.

31. The electronic junction according to claim 18 wherein said electronic junction is devoid of electrolytic solution.

32. The electronic junction according to claim 18 wherein said electronic junction is devoid of liquid.

33. The electronic junction according to claim 18 wherein said second conductive component additionally comprises at least one ion.